

# Louisville Metro Air Pollution Control District 701 West Ormsby Avenue, Suite 303 Louisville, Kentucky 40203-3137



# **September 22, 2020**

# Federally-Enforceable District-Origin Operating Permit (FEDOOP) Statement of Basis

Source	Preferred Marketing Solutio 2001 Papa John's Blvd. Louisville, KY 40299			Inc. Owner:	Owner: Preferred Marketing Solution 2001 Papa John's Blvd. Louisville, KY 40299	
Applica	tion Documents:	See Tabl	le I-9			
Draft Pe	ermit:	08/21/20	)20			
Permitti	ng Engineer:	Yiqiu Li	n	Permit Nur	mber:	O-1146-20-F
Plant ID	): 1146	SIC:	2752	NAICS:	323110	
Introdu	uction:					
Permits.	Its purpose is to lim	it the plai	nt wide p	potential emission ra	ates from this so	ble District Origin Operating burce to below major source all applicable requirements.
updates j		rmit langu	ıage; assi			zza dough making operation, ission point IDs; and remove
(CO), pa		than 10 i	microns	(PM10), particulate	matter less than	de (NO2), carbon monoxide n 2.5 microns (PM2.5), and one (O3).
Permit	<b>Application Typ</b>	e:				
□ Ir	nitial issuance		Perm	it Revision Administrative Minor Significant	X	Permit renewal
Compli	iance Summary					

 $\boxtimes$ 

Compliance schedule included

Source is operating in compliance

Compliance certification signed

Source is out of compliance

X

#### I Source Information

# 1. Product Description:

Printing products.

## 2. Process Description:

The source operates sheet-fed lithographic printing press, heat-set web lithographic printing press, and digital presses to provide printing service to Papa John's International and other organizations.

#### 3. Site Determination:

Preferred Marketing previously included printing service and Papa John's food service. The source requested to be permitted separately due to the fact that Papa Johns and Preferred Marketing have different management and their SIC code are different. The District approved the company's request. Papa John's food processing equipment is no longer permitted under Preferred Marketing.

# 4. Emission Unit Summary:

Emission Unit	<b>Equipment Description</b>			
U1	Printing operation			
IA1	Indirect-fired natural gas-fired heaters			
IA2	Miscellaneous VOC emitting equipment			
IA3	Miscellaneous PM emitting equipment			

#### **5.** Fugitive Sources:

The source identified no fugitive sources of emissions.

#### **6.** Permit Revisions:

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
197-0-F	07/01/2001	11/05/2001	Initial	Initial Permit Issuance
197-0-F (R1)	12/21/2003	01/23/2004	Revision	Incorporation of construction permit 340-02-C
O-1146-15-F	08/18/2015	09/21/2015	Renewal	Permit renewal; Incorporation of construction permits 34-06-C, 35-06-C and 137-10-C

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
O-1146-15-F (R1)	N/A	09/28/2015	Admin	Added more combustion sources <10 MMBtu/hr for PJ Food Services, Inc.
O-1146-20-F	08/21/2020	09/22/2020	Renewal	Permit renewal; removed pizza dough making operation (U2); removed greenhouse gas requirements from General Conditions.

# 7. Construction Permit History:

Permit No.	Effective Date	Description	
177-00-C	01/02/2001	Heat-set web press, make King Press, with dryer	
178-00-C	01/05/2001	Catalytic oxidizer, make Meg-Tec, model Quantum 020-070	
340-02-C	01/09/2003	Heidelberg 6-color offset lithographic sheet-fed press, capacity 15,000 sheet/hr, model MOZ-74DI	
34-06-C	06/14/2007	Goss International heat-set web lithographic printing press, model Sunday 2000, capacity 1854 fpm	
35-06-C	06/14/2007	Eco-Cool thermal oxidizer, model TL 120-1200, 3,000 scfm	
137-10-C	12/20/2010	Flour, salt, and sugar processing equipment for Papa John's Food Service.	

# 8. Application and Related Documents

Document Number	Date	Description
132391	02/20/2020	Reminder to company for FDEOOP renewal application due
132595	02/21/2020	Company response to request for site visit related to FEDOOP renewal application
133191	02/28/2020	APCD determination – permit Papa John Food Service separately
134379	03/10/2020	APCD remind company regarding FEDOOP renewal application
136228	03/31/2020	Correspondence related to FEDOOP renewal application

Document Number	Date	Description
136240	04/01/2020	District follow up on 2020 FEDOOP renewal application
139199	04/30/2020	APCD reminder to company for FEDOOP renewal application
139235	04/30/2020	Correspondence regarding FEDOOP renewal application
140388	05/13/2020	Correspondence related to FEDOOP renewal
140416	05/14/2020	Correspondence regarding renewal application
141910	06/01/2020	Correspondence regarding FEDOOP renewal application
141951	06/02/2020	FEDOOP renewal application submitted
142934	06/15/2020	Approved plantwide PTE for 2020 FEDOOP renewal
164812 & 164824	8/18/2020 and 8/19/2020	Company comments on pre-draft permit and District response

# 9. Emission Summary

None

Pollutant (ton/yr)	CO	NOx	$SO_2$	$PM_{10}$	VOC	Total HAP	Single HAP
Potential Emissions	4.92	5.85	0.04	1.61	329.9	7.98	4.88
Major source trigger (based on PTE)	No	No	No	No	Yes	No	No

10.	App	licable Requiren	nents		
		40 CFR 60	$\boxtimes$	SIP	40 CFR 63
		40 CFR 61		District Origin	Other
11.	Refe	erenced Federal l	Regulati	ions:	
	The	source has no fed	eral requ	nirements.	
12.	Non	-Applicable Regi	ulations	:	

#### II Regulatory Analysis

### 1. Stratospheric Ozone Protection Requirements:

a. Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. Preferred Marketing does not manufacture, sell, or distribute any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

#### 2. Basis of Regulation Applicability

#### a. Applicable Regulations

Regulation	Title	Basis
7.06	Standards of Performance for New Indirect Heat Exchangers	Regulation 7.06 establishes the requirements for new indirect heat that commence construction after August 17, 1971, April 9, 1972, or December 22, 1976, depending on capacity of the heat exchangers.
7.08	Standards of Performance for New Process Operations	Regulation 7.08 establishes the requirements for PM emissions from new processes that commence construction after September 1, 1976.
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	Regulation 7.25 provides for the control of emissions of volatile organic compounds from new (built after December 16, 1987) sources.

#### b. Plantwide

- i. Preferred Marketing is potentially major for VOC. Regulation 2.17

   Federally Enforceable District Origin Operating Permits establishes requirements to limit the plant wide potential emission rates to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements. The source requested limits of the VOC less than 25 tons per year, to be classified as a synthetic minor (FEDOOP) source.
- ii. Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. Preferred Marketing has requested

- emission limits of less than 25 tons per year for all regulated air pollutants to be considered exempt from local TAC (STAR) regulations, as defined by Regulation 5.00, section 1.13.5.
- iii. Regulation 2.17, section 5.2, requires monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the district upon request.
- iv. Regulation 2.17, section 7.2, requires stationary sources for which a FEDOOP is issued to submit an Annual Compliance Certification by April 15, of the following calendar year. In addition, as required by Regulation 2.17, section 5.2, the source shall submit regular reports to show compliance with the permit. Compliance reports and compliance certifications shall be signed by a responsible official and shall include a certification statement per Regulation 2.1. The compliance reports are due within 60 days of the end of the reporting period:

Reporting Period	Report Due Date
January 1 - June 30	August 29
July 1 - December 31	March 1 of the following year

# **c. Emission Unit U1** – Printing operation

EP	Description	Applicable Regulations
E1	6-color offset lithographic sheet-fed press, make Heidelberg, model MOZ-74DI, capacity 15,000 sheet/hr, printing size 20"x29"	7.25
ЕЗ	4-color heatset web lithographic printing press, made Goss International, model Sunday 2000, capacity 1,854 fpm, printing width 38	7.25

#### i. Standards

#### (1) **VOC**

- (a) Regulation 7.25 establishes VOC emission limits and raw material VOC-content limits through Best Available Control Technology (BACT).
- (b) Regulation 7.25 establishes VOC emission limits for the heatset web press (E3) through temperature limits and consistent operation of the associated thermal oxidizer.

#### **III** Other Requirements

#### 1. Temporary Sources:

The source did not request to operate any temporary facilities.

#### 2. Short Term Activities:

The source did not report any short term activities.

## 3. Emissions Trading:

The source is not subject to emission trading.

## 4. Alternative Operating Scenarios:

The source did not request any alternative operating scenarios.

# 5. Compliance History:

There are no records of any violations of the terms of the present or prior construction or operating permits.

# 6. Calculation Methodology or Other Approved Method:

Emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc) or hours of operation of the equipment by the appropriate emission factor and 1 minus any control device's efficiency. The following emission factors and calculation methodology shall be used unless other methods or emission factors are approved in writing by the District.

Unit ID	Emission Point Description	Pollutants	Emission Factors Unit	Uncontrolled Emission Factors	Emission Factor Sources	Notes
U1	Lithographic printing presses (E1, E3)	VOC/HAP	Mass balance method based on actual ink and solvent usage <sup>1</sup>			
UI	Thermal oxidizer NG combustion	VOC	lb/MMcf	5.5	AP-42, 1.4-2	PTE (total) = 0.133 tpy
IA1	Heaters (IE-1)	VOC	lb/MMcf	5.5	AP-42, 1.4-2	PTE (total) = 0.189 tpy
IA2	Digital printers (IE-2 and IE-3)	VOC	lb/hr	0.0015	Engineering Judgement	PTE (each) = 0.006 tpy
	Platesetters (IE-4 and IE-5)	VOC	lb/hr	0.011	Engineering Judgement	PTE (each) = 0.047 tpy
IA3	Cutters (IE-6 through IE-9)	PM	lb/hr	0.01	Engineering Judgement	PTE (each) = 0.044 tpy
	Book binder (IE-10)	PM	lb/hr	0.204	Engineering Judgement	PTE = 0.891 tpy

Unit ID	Emission Point Description	Pollutants	Emission Factors Unit	Uncontrolled Emission Factors	Emission Factor Sources	Notes
	Paper trim collector (IE-11)	PM	lb/hr	0.116	Engineering Judgement	PTE = 0.508 tpy

1. The emissions from lithographic presses are based on VOC and HAP content of the materials used. VOC emissions shall be calculated according to the following methodology, unless the District approves an alternative method in writing.

## Off-set Lithography Sheet-fed Presses

 $E_{VOC} = [(I_{VOC})(I_{Ret}) + (FS_{VOC}) + (BW_{VOC}) + (RW_{VOC}) + (C_{VOC}) + ((CS_{VOC})(R))]$ 

 $E_{VOC}$  = lb VOC Emissions

 $I_{VOC}$  = lb of sheet-fed ink used × weight % VOC in each ink  $I_{Ret}$  = 0.05 (1 – 0.95, Ink oil retention factor for non-heatset inks)

 $FS_{VOC}$  = Qty of fountain solution used (gallons) × VOC content of fountain solution

as applied (lb/gal)

 $BW_{VOC} = Qty$  of blanket wash used (gallons)  $\times$  VOC content of blanket wash as

applied (lb/gal)

 $RW_{VOC} =$  Qty of roller wash used (gallons)  $\times$  VOC content of roller wash as

applied (lb/gal)

 $C_{VOC}$  = Qty of coatings used (gallons)  $\times$  VOC content of coating as applied

(lb/gal)

 $CS_{VOC}$  = Qty of each cleanup solvent used (gallons)  $\times$  VOC content as applied

(lb/gal)

#### Off-set Lithography Heatset Presses

 $E_{VOC} = \\ [(I_{VOC})(I_{Ret})(C_{HI}) \\ + \\ (FS_{VOC}) \\ (C_{FS}) \\ + \\ (BW_{VOC})(C_{BW})] \times (1-CE) \\ + \\ (FS_{VOC}) \\ (FS_{WOC})(C_{W}) \\ (F$ 

 $[(0.05)(I_{VOC})(I_{Ret})] + [(0.30)(FS_{VOC})] + [(0.60)(BW_{VOC})] + Et_{VOC} +$ 

 $[(RC_{VOC})(R)]$ 

 $E_{VOC}$  = 1b VOC Emissions

 $I_{VOC}$  = lb of heatset ink used × weight % VOC in each ink  $I_{Ret}$  = 0.80 (1 – 0.2, Ink oil retention factor for heatset inks)

C<sub>HI</sub> = 0.95 (Capture Efficiency for heatset inks)

 $FS_{VOC}$  = Qty of fountain solution used (gallons) × VOC content of fountain solution

as applied (lb/gal)

 $C_{FS} = 0.70$  (Capture Efficiency for fountain solution using alcohol substitutes)

 $BW_{VOC} = \qquad \quad \text{Qty of blanket wash used (gallons)} \times VOC \text{ content of blanket wash as}$ 

applied (lb/gal)

 $C_{BW} = 0.40$  (Capture Efficiency for blanket wash)

CE = Control Device Efficiency

 $Et_{VOC}$  = Qty of each used (gallons)  $\times$  VOC content as applied (lb/gal)

 $RC_{VOC} = Qty \text{ of roller cleaner used (gallons)} \times VOC \text{ content as applied} (lb/gal)$ 

R = 1.0 or 0.50 (Fraction of cleanup solvent unrecovered)

An "R" factor of 0.50 (50 percent VOC credit) may be used for solvents (vapor pressure ≤ 5 mm Hg at 68°F) used to manually clean press components if the rags/wipes used to manually clean press components are

stored in closed/sealed containers immediately after use and the company can document the quantity of solvent recovered.

# 7. Insignificant Activities

Equipment	Qty	PTE (ton/yr)	Regulation Basis
Ceiling mounted unit heaters, indirect-fired natural gas-fired, capacity 8 MMBtu/hr total (see Unit IA1)	6	NOx = 3.44	Regulation 1.02, Appendix A
Digital printer #1, make Ricoh, model Pro C7110x (see Unit IA2)	1	VOC = 0.006	Regulation 1.02, section 1.38
Digital printer #2, make Ricoh, model Pro C7210x (see Unit IA2)	1	VOC = 0.006	Regulation 1.02, section 1.38
Platesetter #1, make Kodak, model Trendsetter TEE (see Unit IA2)	1	VOC = 0.047	Regulation 1.02, section 1.38
Platesetter #2, make Kodak, model Trendsetter TEE (see Unit IA2)	1	VOC = 0.047	Regulation 1.02, section 1.38
Cutter #1, make Polar/Mohr, model 115EMC-MON (see Unit IA3)	1	$PM_{10} = 0.044$	Regulation 1.02, section 1.38
Cutter #2, make Polar/Mohr, model 115ED (see Unit IA3)	1	$PM_{10} = 0.044$	Regulation 1.02, section 1.38
Cutter #3, make Polar/Mohr, model 137AT-XT (see Unit IA3)	1	$PM_{10} = 0.044$	Regulation 1.02, section 1.38
Cutter #4, make Polar/Mohr, model 78X (see Unit IA3)	1	$PM_{10} = 0.044$	Regulation 1.02, section 1.38
Bravo T stitch book binder, make Muller Martini, model 038D-0422 (see Unit IA3)	1	$PM_{10} = 0.89$	Regulation 1.02, section 1.38
Paper trim collector, make Hartzell, for collecting paper circles trimmed from web press (see Unit IA3)	1	PM <sub>10</sub> = 0.51	Regulation 1.02, section 1.38

- 1. Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements.
- 2. Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements.
- 3. The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15<sup>th</sup>.
- 4. Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.

- 5. The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.
- 6. The District has determined that no monitoring, recordkeeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.

#### **a. Emission Unit IA1** – Indirect-fired Natural Gas-fired Heaters

EP	Description	Applicable Regulations
IE-1	Six (6) ceiling mounted unit heaters, indirect-fired natural gas, capacity 8 MMBtu/hr total	7.06

#### i. Standards and Operation Limits

#### (1) **Opacity**

(a) Regulation 7.06, section 4.2 establishes an opacity standard of less than 20%, for the affected facility.

#### (2) **PM**

- (a) The PM emission standard for boilers is determined in accordance with Regulation 7.06, section 4.1.4 and based on capacity of the equipment.
- (b) A one-time compliance demonstration has performed for PM and SO2 for the boilers, process heaters and oven using AP-42 emission factors and combusting natural gas and propane, the regulatory emission standards should be met uncontrolled.

#### (3) SO<sub>2</sub>

- (a) The SO<sub>2</sub> emission standard for boilers is determined in accordance with Regulation 7.06, section 5.1.1 and based on capacity of the equipment.
- (b) A one-time compliance demonstration has performed for PM and SO2 for the boilers, process heaters and oven using AP-42 emission factors and combusting natural gas and propane, the regulatory emission standards should be met uncontrolled.

#### **b.** Emission Unit IA2 – Miscellaneous VOC Emitting Equipment

EP	Description	Applicable Regulations
IE-2	Digital printer #1, make Ricoh, model Pro C7110x	7.25
IE-3	Digital printer #2, make Ricoh, model Pro C7210x	7.25
IE-4	Platesetter #1, make Kodak, model Trendsetter TEE	7.25
IE-5	Platesetter #2, make Kodak, model Trendsetter TEE	7.25

# i. Standards/Operating Limits

# (1) **VOC**

(a) Regulation 7.25 establishes VOC standards for this equipment that do not have BACT requirements.

# **c. Emission Unit IA3** – Miscellaneous PM Emitting Equipment

EP	Description	Applicable Regulations
IE-6	Cutter #1, make Polar/Mohr, model 115EMC-MON	7.08
IE-7	Cutter #2, make Polar/Mohr, model 115ED	7.08
IE-8	Cutter #3, make Polar/Mohr, model 137AT-XT	7.08
IE-9	Cutter #4, make Polar/Mohr, model 78X	7.08
IE-10	Bravo T stitch book binder, make Muller Martini, model 038D-0422	7.08
IE-11	Paper trim collector, make Hartzell, for collecting paper circles trimmed from web press	7.08

# i. Standards and Operation Limits

# (1) **Opacity**

(a) Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%, for processes that commenced construction after September 1, 1976.

#### (2) **PM**

(a) Emission standard for PM for the equipment in the emission unit was determined in accordance with Regulation 7.08, section 3.1.2 as follows:

PM limit (lb/hr) =  $3.59 \times (process weight, tons/hr)^{0.62}$ 

# 8. Source-Wide Equipment Not Regulated

No.	Equipment	Determination Basis
1	Folder #1, make Heidelberg/Stahl, model RFH.66	No emissions
2	Folder #3, make Heidelberg/Stahl, model 1426C-C-3	No emissions
3	Folder #4, make Heidelberg/Stahl, model 1426D-C-3	No emissions
4	Power washer for cleaning, capacity 4.4 HP, gasoline powered	Trivial activity
5	Small shop welder for maintenance	Trivial activity